Docket No. 500.31754CX2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Masayuki TANI *et al.*

Serial No.: 09/845,838

Filed: 1 May 2001

For: VIDEO OR INFORMATION PROCESSING METHOD AND
PROCESSING APPARATUS, AND MONITORING METHOD
AND MONITORING APPARATUS USING THE SAME

Art Unit: 2673

Examiner: Unassigned

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231   27 August 2001

Sir:

In the matter of the above-identified application, Applicant hereby submits the following for entry.

IN THE CLAIMS:

Please cancel Claims 1-31, 39-43 and 45-51, without prejudice or disclaimer.

Please amend Claims 32-35, 44 and 62 as follows.

32.(Once Amended) An image searching method for searching a video image and for displaying the searched image, comprising:

a search key designating step for designating a search key by inputting either a text or a pattern; and an image searching step for displaying a video image in which an object adapted to the search key designated by said search key designating step is being displayed;

wherein said image searching step includes a step for selecting a video

camera based upon said search key.

33.(Once Amended) An image searching method as claimed in Claim 32,

wherein said image searching step includes a step for operating a video camera

based upon the search key.

34.(Once Amended) An image searching method as claimed in Claim 32,

wherein said image search-step includes a step for clearly indicating an object

adapted to the search key by synthesizing a graphics with the searched image to be

displayed.

35.(Once Amended) An image searching method as claimed in Claim 32,

wherein said search key input step includes a step for inputting a search key by a

voice.

44.(Once Amended) An information processing apparatus for storing data to

control an object (referred to "control data" hereinafter), and also for storing either

audio, or video data related to said object, comprising:

means for relating the control data with the audio, or video data; and

means for relating the control data with the audio, or video data based upon

said relating means to be outputted;

wherein;

first reproducing means for reproducing said control data, and second

reproducing means for reproducing at least one of said audio data and said video

data are further comprised;

said relating means includes means for storing information for relating said

control data to said audio data, or said video data;

said output means includes: first output means for outputting said reproduced

measurement data;

second output means for outputting said reproduced sound data, or said

reproduced video data; and

synchronizing means for controlling said first and second output means in

such a manner that said outputted control data is synchronized with said audio data,

or said video data based on said relating information to be outputted.

62. A monitoring apparatus as claimed in Claim 44, wherein third storage

means for storing operation input information of an operator is further comprised,

said output means includes third output means for outputting the operation

input information of the operator in synchronism with the reproduction of the video

data or the audio data;

wherein means for accepting operation input information is further comprised;

said synchronizing means includes means for searching video and audio data

acquired at a time instant very close to a time instant when the designated operation

is inputted; and

said second output means includes means for controlling the third output

means to output the operation input information in synchronism with the reproduction

of the video data, or the audio data by the second output means;

wherein said relating means includes means for storing information to relate

the monitoring object with the control data;

said control means includes means for selecting a monitoring object related to

said selected control data based on said information; and

said second output means includes means for displaying said selected

monitoring object.

Please add new Claims 65-102, as follows.

65.(New) An interactive development system for developing interactive user

interface using a video image, comprising;

pattern drawing means for drawing a pattern on a video image displayed on a

screen of a display means; and

storing means for storing said pattern drawn on said video image in

corresponding relationship with said video image.

66.(New) A live interactive development system for developing an interactive

user interface using a live video image from a video camera comprising;

a pattern drawing means for drawing a pattern on a live video image

photographed by a video camera displayed on a screen of a display means; and

a storing means for storing said pattern drawn on said live video image in

corresponding relationship with said live video image;

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wherein said storing means stores said pattern drawn on said live video

image and camera parameters used for imaging said live video image.

67.(New) An interactive development system as claimed in Claim 66, wherein

said storing means stores a pair of said pattern drawn on said video image and the

identification of a camera used for imaging said video image.

68.(New) An interactive development system as claimed in Claim 66, wherein

said pattern drawing means allows drawing a pattern by combining basic pattern

elements, and further comprising;

a pattern element selecting means for selecting at least one said basic pattern

element drawn on said video image; and

a procedure defining means for defining a procedure for said basic pattern

element selected by said pattern element selecting means and storing said defined

procedure in corresponding relationship with said selected basic pattern element.

69.(New) An interactive live video image operating system for performing a

process with respect to a subject apparatus selected from a plurality of apparatus, a

live real-time video image of said plurality of apparatus photographed live by a video

camera and being displayed live on a display screen of a display means, said

system comprising:

a storing means for storing information about positions of said plurality of

apparatus;

a designating means for designating a point or a portion of said live real-time video image;

an identifying means for identifying an apparatus corresponding to said designated point or portion by said designating means based on said information stored in said means for storing; and

a performing means for performing a process related to said identified subject apparatus.

70.(New) An interactive live interactive video image operating system as claimed in Claim 69, wherein said information stored in said storing means is information representing positions of said plurality of apparatus on said live real-time video image or information representing positions where said plurality of apparatus are actually arranged, respectively.

71.(New) An interactive live video image operating system as claimed in Claim 69, wherein said performing means remotely operates the identified said subject apparatus.

72.(New) An interactive live video image operating system as claimed in Claim 69, wherein said performing means includes a process to change a video image based on a designated said subject apparatus.

73.(New) An interactive video image operating system as claimed in Claim 69, wherein said performing means includes a process to operate a subject video camera based on a designated said subject apparatus.

74.(New) An interactive video image operating system as claimed in Claim 69, wherein said performing means includes a step of superimposing a graphics corresponding to a designated said subject apparatus on said video image to be displayed, and for providing a visual indication as to which apparatus has been designated.

75.(New) An interactive video image operating system as claimed in Claim 69, wherein said performing means includes a step of menu displaying a list of executable processes corresponding to a designated said subject apparatus, and a step of allowing selection of a process to be executed.

76.(New) An interactive video image operating system as claimed in Claim 69, wherein said performing means includes:

a graphics displaying means for synthesizing a graphics corresponding to a designated said subject apparatus with said video image to be displayed;

a graphics element selecting means for selecting a subject element displayed on said graphics; and

an element performing means for performing a process based on said subject element selected by said graphics element selecting means.

77.(New) An interactive video image operating system as claimed in Claim 69, wherein said designating means includes an object highlighting step for highlighting a designated said subject apparatus within an image.

78.(New) An interactive video image operating system as claimed in Claim 69, wherein said performing means includes a step of displaying information related to a designated said subject apparatus.

79.(New) An interactive video image operating apparatus for performing an image searching process, comprising:

a memory for storing information with respect to a plurality of apparatus;;

a designating means for designating a key relating to a subject apparatus said plurality of apparatus;

an identifying means for identifying said subject apparatus corresponding to said designated key based on said information stored in said memory in response to said designated key; and

a photographing means for photographing an identified said subject apparatus by a video camera and displaying a video image of the identified said subject apparatus on a display screen.

80.(New) An interactive video image operating apparatus as claimed in Claim 79, wherein said photographing means operates said video camera based on the identified said subject apparatus so that the video image of the identified said subject apparatus is displayed on said display screen.

81.(New) An interactive video image operating system as claimed in Claim 69, further comprising:

a graphic image display means for displaying a graphic image on said display screen such that said graphic image is superimposed on said real-time video image of said subject apparatus wherein said storing means stores information about a position of said graphic image as said information about position of said apparatus, and said identifying means includes means for identifying a pointed graphic image with said subject apparatus when said graphic image is pointed by said pointing means.

82.(New) An interactive video image operating system as claimed in Claim 69, wherein said performing means includes means for, when a pointed position on said display screen is moved on said display screen, operating said subject apparatus in a manner that the real-time video image of said subject apparatus traces the pointed position on said display screen.

83.(New) An interactive live video image operating system as claimed in Claim 69, wherein said information stored in said storing means is information representing positions of said plurality of apparatus on said display screen or information representing positions where said plurality of apparatus are actually arranged, respectively, and that said designating means designates a position on said display screen of said live video image displayed live on said display screen, and said identifying means identifies the designated live video image with said

subject apparatus photographed live by said video camera based on a designated position on said display means and said information stored in said storing means.

84.(New) An interactive live video image searching method as claimed in Claim 33, wherein said step for operating a video camera includes a substep for panning or tilting said video camera to photograph said subject apparatus corresponding to said search key designated by said search key designating step.

85.(New) An interactive live video image searching method as claimed in Claim 33, wherein said step for operating a video camera includes a substep for zooming said video camera to photograph said subject apparatus corresponding to said search key designated by said search key designating step.

86.(New) A plant monitoring apparatus, comprising:

a storing section for storing image information of an object photographed by a camera which photographs a subject to be monitored and for storing process data of said subject to be monitored so as to correspond in time base in its contents with said photographed image information;

a read section for reading from said storage section said photographed image information and said process data corresponding in time base in its contents with said photographed image information; and

a display section for displaying said photographed image information and said process data corresponding in time base in its contents with said photographed image information read from said read section.

87.(New) A plant monitoring apparatus, comprising:

a storing section for storing image information of an object photographed by a camera which photographs a subject to be monitored and for storing process data of said subject to be monitored;

a control section for controlling, at a time of display, said photographed image information and said process data so as to be synchronous in its contents with said photographed image information; and

a display section for displaying said photographed image information and said process data synchronous in its contents with said photographed image information read from said read section.

88.(New) An interactive live video image operating method for operating a video image of at least one object displayed on a screen of display means, comprising:

an object designating step for designating an object within a video image; and

a process performing step for performing a process corresponding to the designated object, wherein said apparatus designating step includes an apparatus highlighting step for highlighting said subject apparatus designated.

89.(New) An image operating method as claimed in Claim 88, wherein said object designating step includes a step for designating an object of an image inputted from a video camera and being displayed on said screen, and wherein said apparatus designating step includes an apparatus highlighting step for highlighting said subject apparatus designated.

90.(New)   An interactive live video image operating system for performing a process with respect to a subject apparatus selected from a plurality of apparatuses, a live real-time video image of said plurality of apparatuses photographed live by a video camera being displayed live on a display screen of a display means, said system comprising:

a parameter control means for controlling a parameter of said video camera;

a storing means for storing information about positions of said plurality of apparatuses;

a pointing means for pointing on said display screen to a live real-time video image of said subject apparatus displayed live on said display screen of said display means;

an identifying means for identifying a pointed to live real-time video image with said subject apparatus based on said information stored in said storing means and said parameter of said video camera; and

a performing means for performing a process related to an identified said subject apparatus.

91.(New) An interactive live video image operating apparatus for performing a process with respect to a subject apparatus selected from a plurality of apparatus, comprising:

a video camera for photographing at least one apparatus of said plurality of apparatus;

a display means for displaying on a display screen thereof a video image of said at least one apparatus, as a real time video image, which is being photographed by said video camera;

a designating means for designating on said display screen the real time video image of said subject apparatus being displayed on said display screen of said display means; and

a performing means for performing a process relating to said subject apparatus corresponding to the designated real time video image;

wherein said performing means includes a step of superimposing a graphics corresponding to a designated said subject apparatus on said video image to be displayed, and for providing a visual indication as to which apparatus has been designated.

92.(New) An interactive live video image operating method for performing a process with respect to a subject apparatus selected from a plurality of apparatus, comprising:

a video camera for photographing at least one apparatus of said plurality of apparatus;

a display means for displaying on a display screen thereof a video image of said at least one apparatus, as a real time video image, which is being photographed by said video camera;

a designating means for designating on said display screen the real time video image of said subject apparatus being displayed on said display screen of said display means; and

a performing means for performing a process relating to said subject

apparatus corresponding to the designated real time video image;

wherein said designating means includes an apparatus highlighting step for

highlighting said subject apparatus designated within an image.

93.(New) A interactive live video image operating system as claimed in Claim

89, wherein said parameter is at least one of an imaging direction, an attitude, an

angle of view and a position of said video camera.

94.(New) An interactive live video image operating system as claimed in

Claim 69, wherein at least one of said plurality of apparatus is an instructing means

for supplying an instruction for controlling a device to be controlled to said device,

and said performing means operates said instructing means when said instructing

means is designated by said designating means so that said instructing means

supplies the instruction to said device; and

wherein said performing means includes means for, when the live real-time

video image of said subject apparatus is pointed to on said display screen by said

pointing means, operating said parameter control means to change a parameter of

said video camera.

95.(New) An interactive live video image operating system as claimed in

Claim 89, wherein said identifying means includes means for converting an

information about the position of the pointed to live real-time video image into a

converted information in accordance with the parameter of said video camera, and

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means for identifying the pointed to live real-time video image with said subject apparatus based on said information stored in said storing means and the converted information.

96.(New) An interactive live video image operating system as claimed in Claim 89, further comprising:

a graphic image display means for displaying a graphic image on said display screen such that said graphic image is superimposed on said live real-time video image of said subject apparatus, wherein said storing means stores information about a position of said graphic image as said information about position of said apparatus, said identifying means includes means for identifying a pointed to graphic image with said subject apparatus when said graphic image is pointed to by said pointing means, and said graphic image display means includes means for, when a parameter of said video camera is changed, changing a display of said live real-time graphic image of said subject apparatus on said display screen in accordance with the changed parameter.

97.(New) An interactive live video image operating system as claimed in Claim 89, wherein said performing means includes means for, when a pointed to position on said display screen is moved on said display screen, operating said subject apparatus in such a manner that the live real-time video image of said subject apparatus traces the pointed to position on said display screen.

98.(New) An interactive live video image operating apparatus allowing user designation of at least one apparatus in a live video image for initiating at least one operation with respect thereto, said apparatus comprising:

at least one camera performing live photography of at least one apparatus to be monitored;

a display receiving live image signals from said at least one camera, and displaying a live video image of said at least one apparatus;

a data memory storing operation data for each said at least one apparatus, each said operation data being usable for performing said at least one operation with respect to a respective apparatus;

a designating device allowing user designation of an apparatus live image on the displayed said live video image, for which said at least one operation is to be initiated;

a relating device for determining a selected apparatus from a designated said apparatus live image, and determining a set of said operation data in said data memory related to said selected apparatus; and

an actuating device for receiving said set of said operation data determined in said relating device, and using said set for performing said at least one operation with respect to said selected apparatus;

and further comprising:

a graphic image display device responsive to user designation of said apparatus live image, for superimposing a graphic image on said live real-time video image with respect to said apparatus live image so as to indicate a selected apparatus on said live real-time video image.

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99.(New) An interactive live video image operating apparatus allowing user designation of at least one apparatus in a live video image for initiating at least one operation with respect thereto, said apparatus comprising:

at least one camera performing live photography of at least one apparatus to be monitored;

a display receiving live image signals from said at least one camera, and displaying a live video image of said at least one apparatus;

a data memory storing operation data for each said at least one apparatus, each said operation data being usable for performing said at least one operation with respect to a respective apparatus;

a designating device allowing user designation of an apparatus live image on the displayed said live video image, for which said at least one operation is to be initiated;

a relating device for determining a selected apparatus from a designated said apparatus live image, and determining a set of said operation data in said data memory related to said selected apparatus; and

an actuating device for receiving said set of said operation data determined in said relating device, and using said set for performing said at least one operation with respect to said selected apparatus; and further comprising:

a graphic image display device responsive to user designation of said apparatus live image, for superimposing a graphic image on said live real-time video image with respect to said apparatus live image so as to provide further information concerning a selected apparatus on said live real-time video image.

100.(New) An image searching method as claimed in Claim 33, wherein said image search-step includes a step for clearly indicating an object adapted to the search key by synthesizing a graphics with the searched image to be displayed.

101.(New) An image searching method as claimed in Claim 33, wherein said search key input step includes a step for inputting a search key by a voice.

102.(New) An image searching method as claimed in Claim 34, wherein said search key input step includes a step for inputting a search key by a voice.

REMARKS

Claims 1-64 were filed with the above-identified application. Unrelated to any prior art rejection from any parent application, Claims 1-31, 39-43 and 45-51 have been cancelled without prejudice or disclaimer, Claims 32-35, 44 and 66 have been amended, and new Claims 65-102 have been added. Upon entry of this Preliminary Amendment, Claims 32-38, 44 and 52-102 will be pending for further consideration and search in the present application.

INFORMATION DISCLOSURE STATEMENT

Submitted concurrently herewith is an Information Disclosure Statement with Forms PTO-1449, for entry in the above-identified application so such information appears on the face of any patent issuing hereon.

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NOTICE TO FILE MISSING PARTS

Submitted concurrently herewith is a Response to Notice to File Missing

Parts, along with a copy of the Notice and all of the appropriate late filing surcharge

and claims fees authorized for payment on the attached Form PTO-2038.

APPENDIX A-MARKED VERSION

Attached hereto is Appendix A-Marked Version to indicate additions and

deletions in the amended claims by underlining and bracketing, respectively.

CONCLUSION

Applicant respectfully submits that this Preliminary Amendment is proper and

should be entered, because it is being timely filed so as not to burden the Office with

undue reconsideration and/or further search in connection therewith.

No additional fees are required other than those authorized in the attached

Form PTO-2038. However, if any Petition or fees are actually proper for the filing of

this paper, please charge same to ATS&K Deposit Account No. 01-2135 (as Order

No. 500.31754CX2), and please credit any overpayment or excess fees thereto.

Respectfully submitted,

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ATTACHMENTS:
Appendix A-Marked Version

APPENDIX A-MARKED VERSION

32.(Once Amended) An image searching method [as claimed in Claim 31] for searching a video image and for displaying the searched image, comprising:

a search key designating step for designating a search key by inputting either a text or a pattern; and an image searching step for displaying a video image in which an object adapted to the search key designated by said search key designating step is being displayed;

wherein said image searching step includes a step for selecting a video camera based upon said search key.

33.(Once Amended) An image searching method as claimed in [Claim 31 or] Claim 32, wherein said image searching step includes a step for operating a video camera based upon the search key.

34.(Once Amended) An image searching method as claimed [any one of the preceding Claims 31 to 33] in Claim 32, wherein said image search-step includes a step for clearly indicating an object adapted to the search key by synthesizing a graphics with the searched image to be displayed.

35.(Once Amended) An image searching method as claimed [any one of the preceding Claims 31 to 34] in Claim 32, wherein said search key input step includes a step for inputting a search key by a voice.

44.(Once Amended) An information processing apparatus [as claimed in Claim 43] for storing data to control an object (referred to "control data" hereinafter), and also for storing either audio, or video data related to said object, comprising:

means for relating the control data with the audio, or video data; and

means for relating the control data with the audio, or video data based upon said relating means to be outputted;

wherein;

first reproducing means for reproducing said control data, and second reproducing means for reproducing at least one of said audio data and said video data are further comprised;

said relating means includes means for storing information for relating said control data to said audio data, or said video data;

said output means includes: first output means for outputting said reproduced measurement data;

second output means for outputting said reproduced sound data, or said reproduced video data; and

synchronizing means for controlling said first and second output means in such a manner that said outputted control data is synchronized with said audio data, or said video data based on said relating information to be outputted.

62. A monitoring apparatus as claimed in Claim [51] 44, wherein third storage means for storing operation input information of an operator is further comprised,

said output means includes third output means for outputting the operation

input information of the operator in synchronism with the reproduction of the video

data or the audio data;

wherein means for accepting operation input information is further comprised;

said synchronizing means includes means for searching video and audio data

acquired at a time instant very close to a time instant when the designated operation

is inputted; and

said second output means includes means for controlling the third output

means to output the operation input information in synchronism with the reproduction

of the video data, or the audio data by the second output means;

wherein said relating means includes means for storing information to relate

the monitoring object with the control data;

said control means includes means for selecting a monitoring object related to

said selected control data based on said information; and

said second output means includes means for displaying said selected

monitoring object.